

# Montana Regional Water Systems

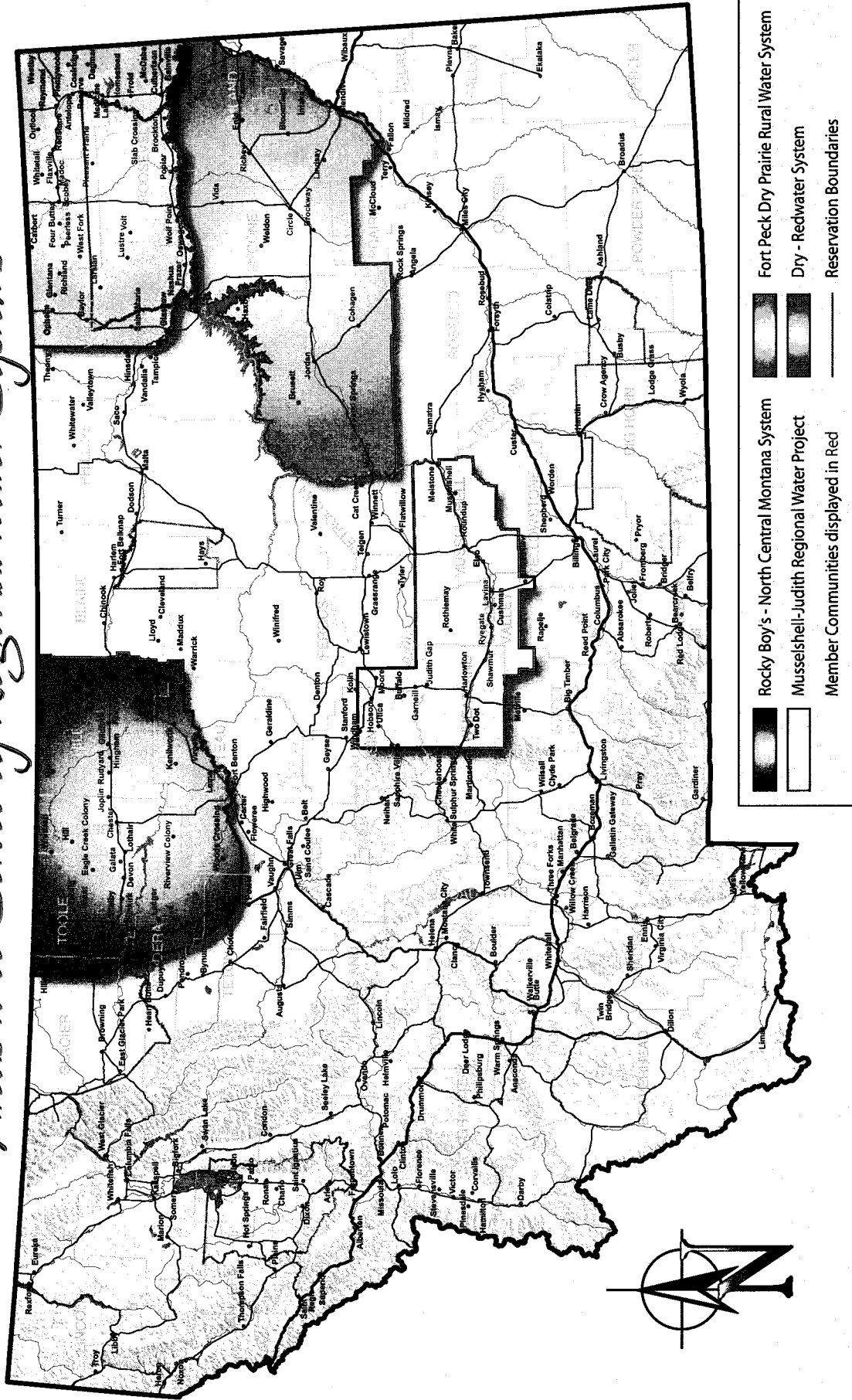
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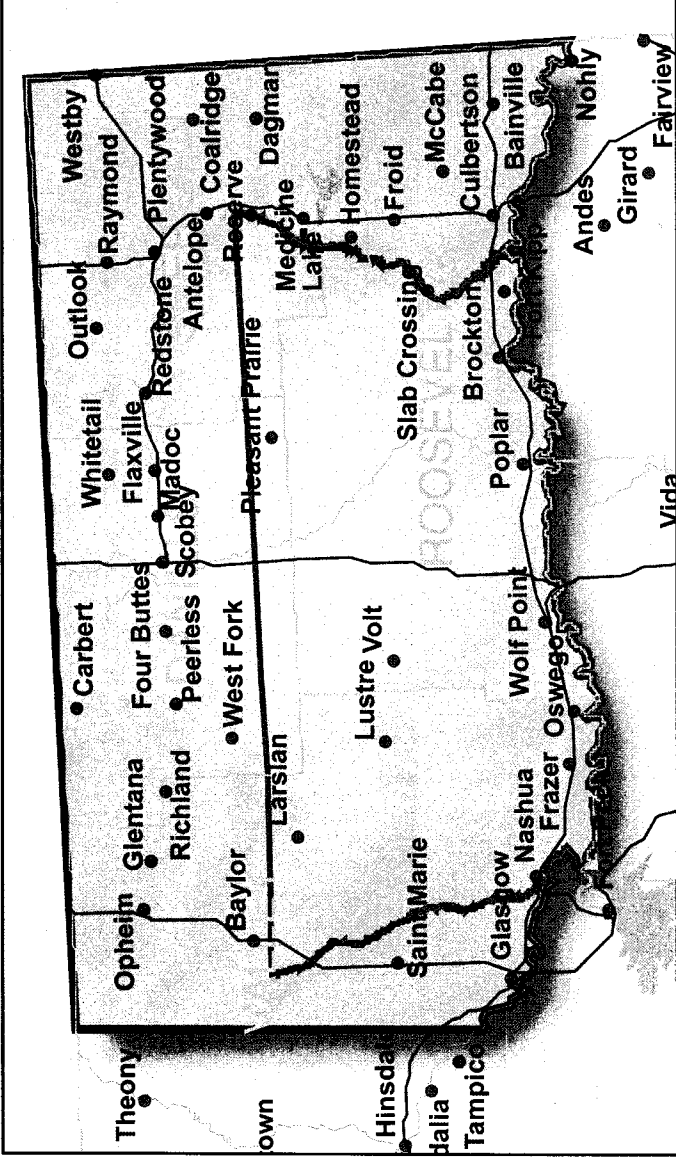
Three satisfied customers enjoy water  
from Dry Prairie's first construction project

Prepared by: Montana Department of Natural Resources and Conservation  
Conservation and Resource Development Division

# Areas to be Served by Regional Water Systems



## Fort Peck – Dry Prairie Regional Water System



- 22 communities and rural connections will serve more than 25,000 users
- Centralized Missouri River intake and water treatment plant, located between Wolf Point and Poplar
- Interim service plans will provide water to communities and individuals until the water treatment plant has been completed
- Project cost \$252 million  
State and local share is \$21 million

# Fort Peck – Dry Prairie Regional Water System

*The Fort Peck/Dry Prairie system is testimony that rural residents can work together to address long-standing drinking water problems.*

– Clint Jacobs, Manager, Dry Prairie Regional Water Authority

## The Need

Groundwater, the primary source of drinking water in the area, looks bad and tastes worse. Municipal systems distribute water with dissolved solids ranging from 750 to 2,730 mg/L and sulfates as high as 1,120 mg/L. This is generally higher than the suggested secondary contaminant limits for drinking water. Consequently, tap water is often unusable for drinking and cooking.

## Formation of a Regional Water System

The Assiniboine and Sioux people who comprise the Fort Peck Tribes possess water rights on the Missouri River that will supply the system. The Tribes envisioned a regional water system for the area and offered to wholesale water to their off-reservation neighbors so all could benefit from a regional system. This began a partnership that promises to improve the quality of life for all residents of northeast Montana. The off-reservation portion of the system is managed by the Dry Prairie Rural Water Authority.

In October 2000, Congress authorized the Fort Peck - Dry Prairie regional water system. Construction began in 2003, and the system is now at various stages of completion in multiple locations.

## Construction Status

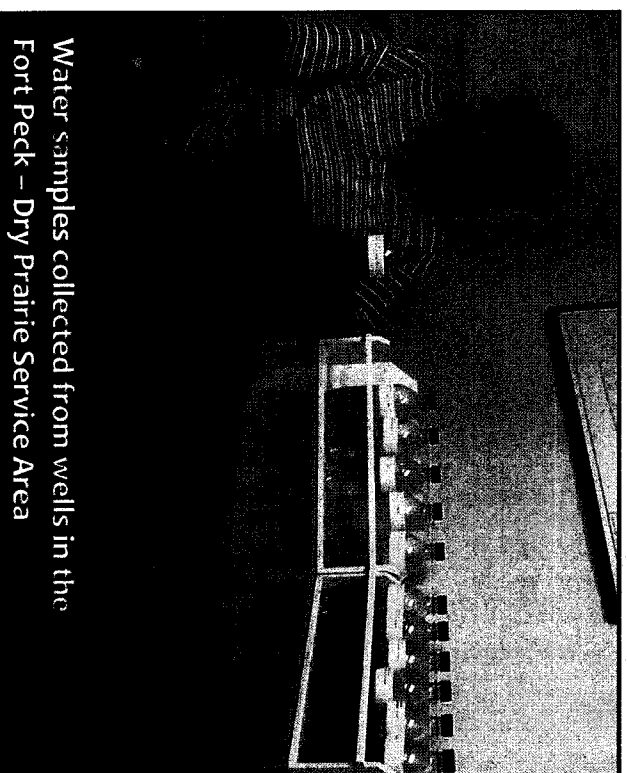
Dry Prairie now delivers drinking water to residents in the Froid and Medicine Lake area, the town of Bainville, and about 200 rural households in Sheridan and Roosevelt counties. The Tribes have constructed an intake structure on the Missouri River near Wolf Point, and completed the design stage of the water treatment plant. The first phase of the plant is expected to be completed by April 2009. With funding from the TSEP Regional Water Fund, both partners are currently working together to build service lines to Fort Kipp on the Reservation.

When the entire project is completed, it will be supplied by a single intake facility on the Missouri River and a nearby water treatment plant. Nearly 3,200 miles of pipeline will deliver drinking water to more than 20 communities and nearly 4,000 farms, ranches and rural homes.

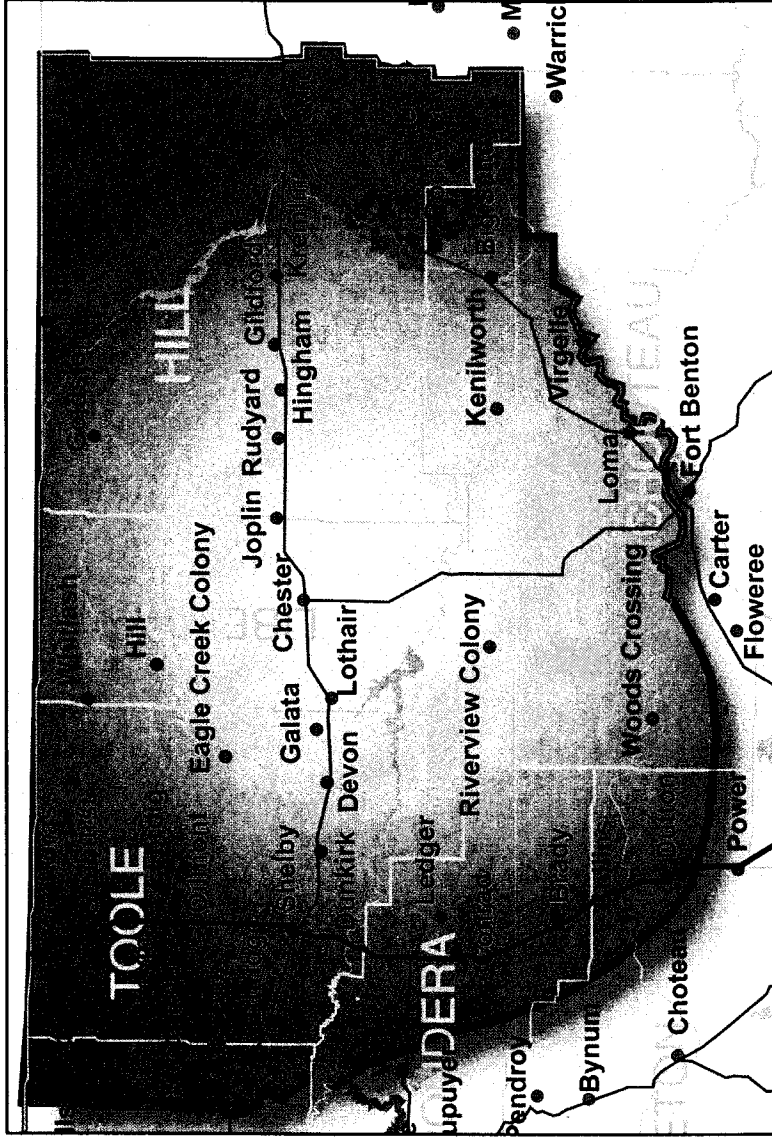
## Cost

Total estimated project cost in 2008 dollars is: \$252 million. The state and local share of that amount is \$21 million. The federal contribution will be over \$230 million.

Water samples collected from wells in the  
Fort Peck – Dry Prairie Service Area



## Rocky Boy's – North Central Regional Water System



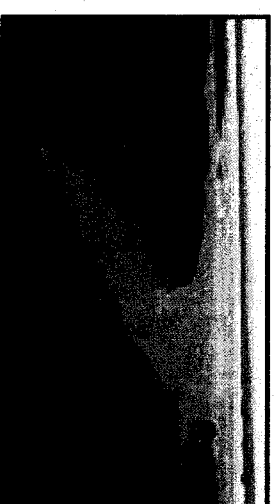
- Authorized by Congress in 2002, construction on the reservoir portion of the intake facility was completed in the summer of 2007.
- The off-Reservation portion of the system will serve more than 20 communities and water districts in seven counties of north central Montana. The Reservation portion of the system is designed to serve about 4,000 people.
- North Central Authority will begin work on its first construction project in 2009: supplying North Havre County users with water from the City of Havre .
- Total System project cost: \$330 million, state and local share will be \$39 million

# Rocky Boys – North Central Regional Water System

*E mah ni tow wah ki tek nip piy.*

*– Cree Saying*

*“Water gives life to everything”*



Location of Intake Structure on Tiber Reservoir

## The Need

The need for a new regional water system is due to poor quality drinking water, structural water supply constraints and the increasing costs for compliance with the federal Safe Drinking Water Act. As many as 19 member communities of the System are either out of compliance with Montana drinking water requirements or anticipate difficulty meeting future EPA standards.

## The Partnership

A water rights compact between the Chippewa - Cree Tribe of the Rocky Boy's Reservation and the State of Montana was signed by President Clinton in 1999, allocating water to the Tribe from Tiber Reservoir (Lake Elwell) located south of Chester. The North Central Montana Regional Water Authority was formed to partner with the Tribe in managing off-reservation water delivery systems. The Rocky Boy's/North Central Montana Regional Water System was authorized by Congress in 2002.

## System Design

When completed, the entire regional water system will consist of shared core components (intake structure, water treatment, and main distribution pipeline), and two separately-managed systems that will distribute to on- and off-reservation communities and county water districts. The on-reservation system is managed by the Chippewa – Cree Tribe who will wholesale water to the North Central Montana Regional Water Authority for distribution to off-reservation users.

The regional system will serve approximately 10,000 households with an estimated population of 28,000 located on the Rocky Boy's Reservation and numerous off-reservation systems such as municipalities, county water districts, Hutterite colonies and other users.

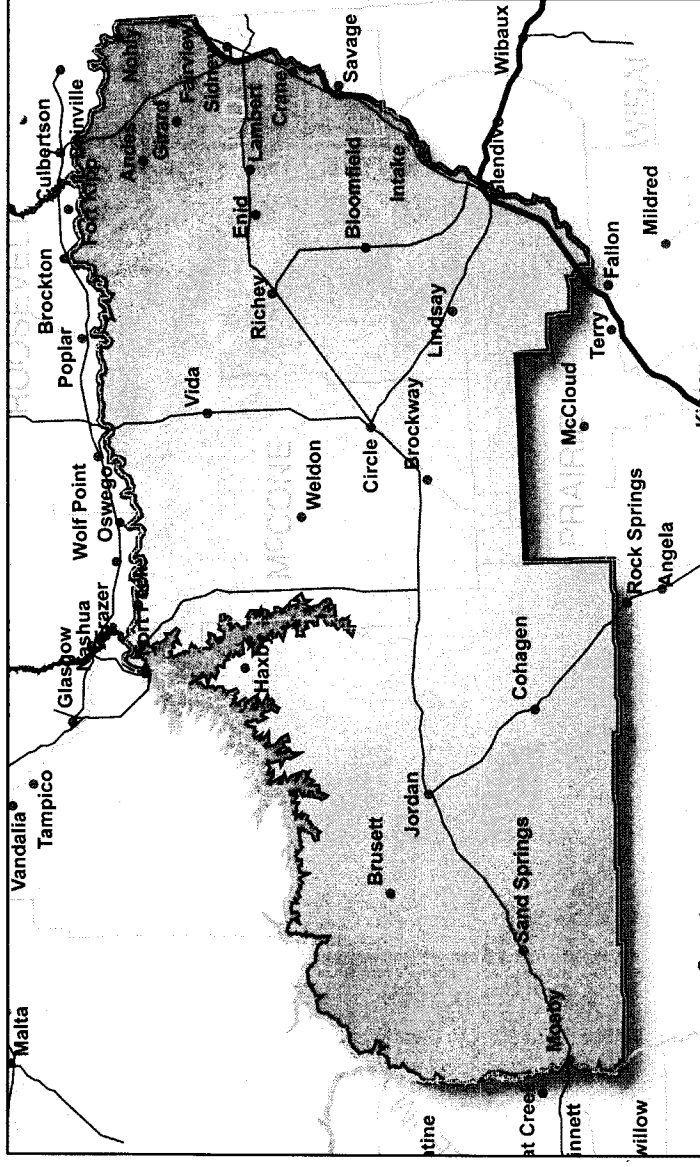
## Construction Status

The Chippewa Cree Construction Company completed the reservoir portion of the intake structure located on Lake Elwell near Tiber Dam. Feasibility studies, engineering design, and cost estimates have been prepared for as many as 15 different interim service options that will solve many of the System's water quality problems. With funding from the TSEP Regional Water Fund, the North Central Regional Water Authority is currently working with the Chippewa Cree Tribe to purchase up to \$1 million of pipeline materials that will be used to construct on-reservation distribution system. This purchase will be credited to the State's fiscal obligation for construction of shared System components.

## Cost

Total estimated project cost in 2010 dollars is \$329 million. State and local share will be \$39 million.

# Dry Redwater Regional Water System

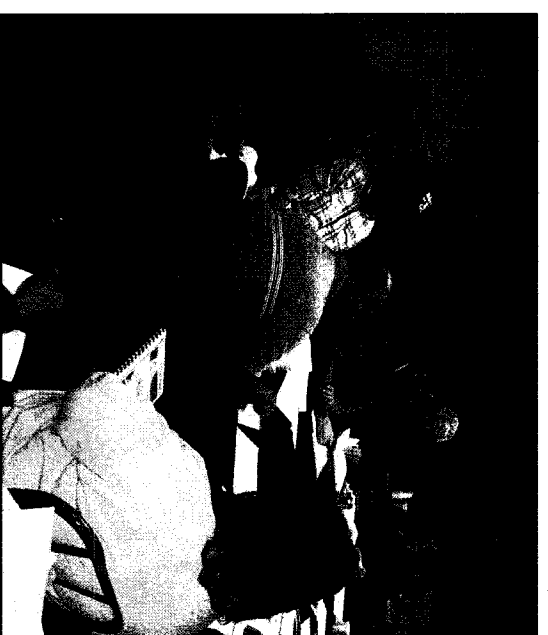


- As proposed, this system would cover the greatest geographic area of the four Montana regional water projects
- Estimated to serve 10,000 people
- System will include an intake in the Big Dry Arm of Fort Peck Reservoir, and a treatment plant north of Circle
- Senator Baucus will sponsor federal legislation to authorize the project, scheduled for action during the 2009 Congressional session.
- Estimated project cost is approximately \$115 million, with non-Federal obligation at 25%, or nearly \$29 million

# Dry Redwater Regional Water System

*The availability of good quality and quantity of water will allow businesses to build and develop - whether it is a grain or cattle processing facility or an energy related facility.*

- Dry Redwater Regional Water Authority Website



Recent Board Meeting Dry - Redwater System

## **Purpose and Need**

The Dry Redwater Regional Water Authority was formed in 2005 to own and operate a regional water system that would provide household and livestock water to the service area. The Project was established due to interest from local officials and residents of Garfield, McCone, and portions of Dawson, Richland and Prairie Counties. The System will be designed to serve about 7,000 residents using water with water from Fort Peck Reservoir.

## **Authorization Status**

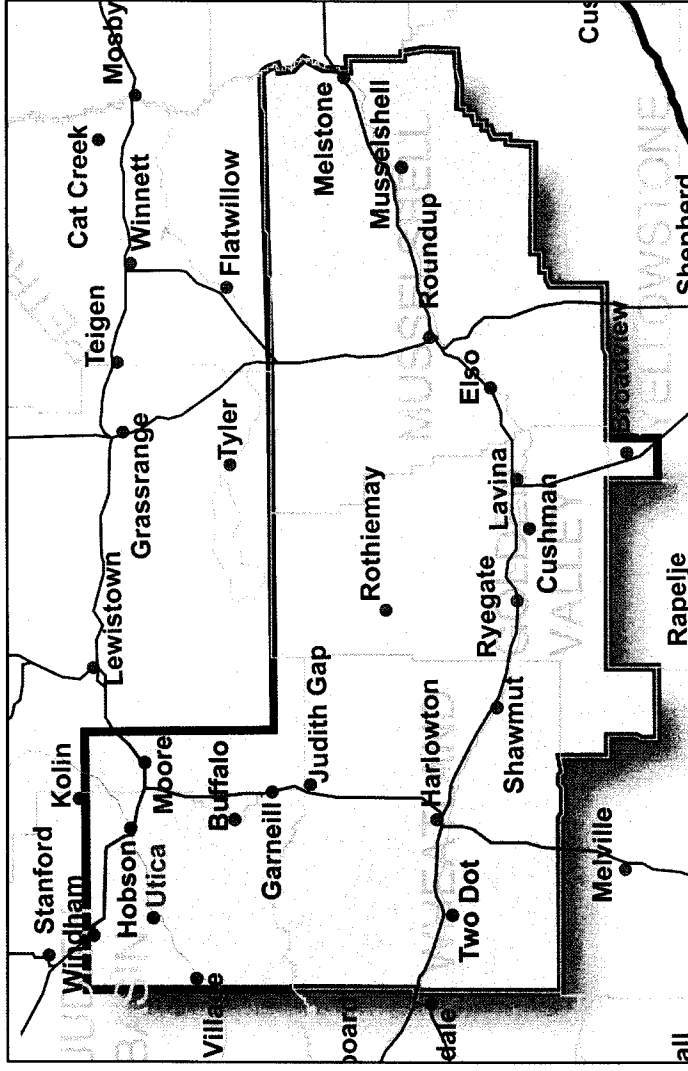
Senator Baucus introduced authorizing legislation in July, 2008. Because no action was taken, the Senator will reintroduce legislation in early 2009.

## **Construction Status and Cost**

Dry Redwater has negotiated with the U.S. Army Corps of Engineers for a water intake location on the Dry Arm of Fort Peck Reservoir and is proceeding with plans to purchase 40 acres of privately held land in McCone County for a water treatment plant site. Current engineering estimates of the cost for the expanded system are approximately \$115 million. The need for construction of a surface water treatment plant and the considerable distances involved in piping treated water account for the bulk of the cost.



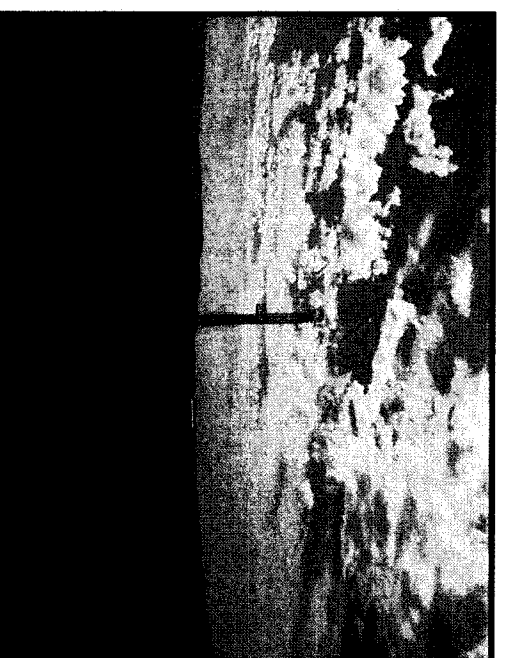
# Musselshell-Judith Regional Water System



- Will serve over 5,000 users
- Project area is located in the Judith and Lower Musselshell watersheds
- Member communities have significant water quality problems. Most draw from shallow groundwater systems for their drinking water.
- The proposed project would use groundwater from the Madison Formation, at depths in excess of 3,000 feet.
- Current estimates of project costs are in the \$80-\$90 million range; state and local combined shares are likely to total 25%.

# Musselshell-Judith Regional Water System

"High quality drinking water is a given for most Montanans. We simply go to the faucet and turn it on..."  
Midwest Assistance Program Brochure



Test Drilling Utica Well

## Purpose and History

The Musselshell – Judith Regional Water Authority (the Authority) was formally established in September 2005, with a board of directors representing each community to be served on the regional system. The Authority hopes to help communities in Central Montana that have been plagued for years by low water quality and quantity. Communities along the Musselshell River drainage have long had difficulty in obtaining reliable quantity and quality water sources.

## A Groundwater Supply System

Inspired by drought, the City of Roundup and Musselshell County began work seven years ago on a project to explore the Madison Aquifer on the northeast end of the Little Belt Mountains as a potential water source. Using groundwater to supply a regional water system will save the cost of building and maintaining a water treatment plant, and potentially enables the Authority to diversify the source of water at various locations throughout the system.

## Status

The Regional Authority has drilled and tested a well at a promising location near Utica. Alternative well field locations are also being explored for additional sources. After completion of a feasibility study and alternatives analysis, the Musselshell-Judith Regional Water Authority will pursue congressional authorizing legislation.

## Cost

The Authority estimates a total cost of \$80- \$90 million for well development and the distribution system. State and local share will likely be about \$22 million.

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